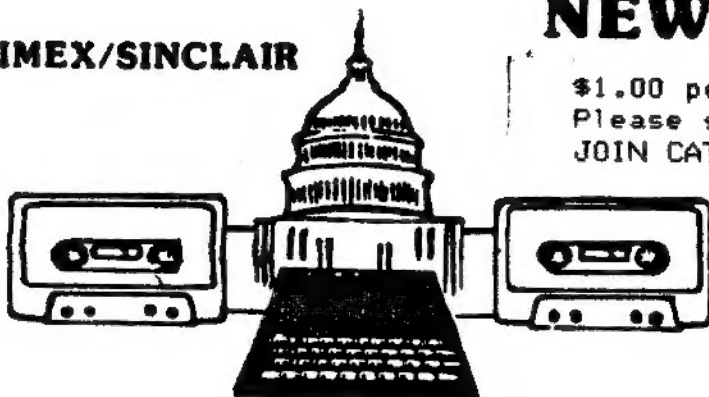


CATS

CAPITOL AREA TIMEX/SINCLAIR
USERS GROUP

NEWSLETTER

\$1.00 per copy
Please support your computer-
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Vol. 4, No. 8
November 1986

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PRESIDENTIAL RAMBLINGS

The last meeting had more than its share of technical difficulties. We could not get the proper phone hook-up to get on to CompuServe. This made Dave Rothman's visit somewhat less than optimum. Vernon Smith brought in his 2 QL setups, which we succeeded in networking. My QL would not network with his however. Unfortunately, the networking would only function when no one was looking.

Dave will be coming back this month to give a another talk about CompuServe. This time Dave will have CompuServe starter packs to give out to everyone who attends, courtesy of CompuServe. Dave has also volunteered to give a mini course to anyone feeling shy about getting online and talking to TS computer people all over the country. Since the library phone hookup appears to be impossible, the course will have to be arranged at a convenient time for those interested.

My visit to Aerco proved to be very fruitful. We designed a new 32K NVM board that has been simplified from the old one and will be available as a KIT! I also picked up 3 Aerco Disk system kits for Mark, Akin and Phil. Jerry told me that of all of the kits sold, all of them are now working. The only problems were minor solder bridge problems. He also suggested that there be a completed board handy to serve as a model.

The Spectrum OS for the board has had to take a back seat while he tries to make a living down there, but it is still in the works.

The early session this month will include John Riley giving a tutorial on converting from cassette to disk. Please bring your favorite programs for conversion help.

Tom B.

October Meeting

The October CATS meeting was both vexing and informative.

Vexations grew out of CATS' inability to string a voice-grade telephone line into the meeting room either through the Library's phone system or through the use of our own communications magic.

This made it impossible for DAVID M. ROTHMAN to carry out the presentation he had prepared on using Sinclairs to access the CompuServe information network.

Although he had an alternative presentation to make, the meeting got sidetracked onto other matters and he had to depart because of prior commitments and never got to address the group.

A make-up session will be scheduled when an appropriate site which has access to the C&P dial-tone can be arranged.

A solution of sorts was mentioned in the October edition of CTM magazine. The publisher of the "QZX Journal" (for Sinclair/ham radio fans) is testing the QL with a MODAPTOR which implements the QL onto Packet Radio!! The staff of CTM magazine is supposed to be connecting up a storm right now dumping texts and files all over the place from one kind of computer to another.

The results of their tests should appear soon.

Watch this space.

H.D.

Deadlines

Newsletter	Meeting
	November 8
November 26	December 13
December 22	January 10
January 26	February 14
February 23	March 14

Also, TOM BENT and VERNON SMITH set up tons of QL's and QL peripherals at the October meeting and demonstrated a live QL network. Using "Network File Server" software, they successfully pulled off one of the main tricks in networking: having one CPU access the disk drive belonging to another CPU. Although their show involved a certain amount of spontaneity, both Tom and Vern have the advantage of using the QL's in their workplace, along with other PC's. They also demonstrated practical appreciation of the various spreadsheet programs used by Sinclair computers and as well as the others.

Topics were solicited from the group to be used for the preliminary sessions replacing the hardware sessions, or for the general group meetings.

They were:

Using the AERCO disk drive
Interfaces (software/hardware)
for printers, modems,
and peripherals
Program conversions:
IBM to Sinclair,
Apples to Sinclair, etc.
OmniCalc, VisiCalc and other
spreadsheets on Sinclairs
TFO (The File Organizer)
ABACUS program for the QL

Other suggestions will be welcomed as the year progresses.

Officers & Functionaries

President	Tom Bent
Vice-President	Hank Dickson
Vice-President	Harry Harrison
Treasurer	Ruth Fegley
N/L Editor	Mark Fisher
N/L Production	Sarah Fisher
	Bob Curnutt
Corresp Secy.	Mike Cohen

From the Editor

"We're In The Chips!!"

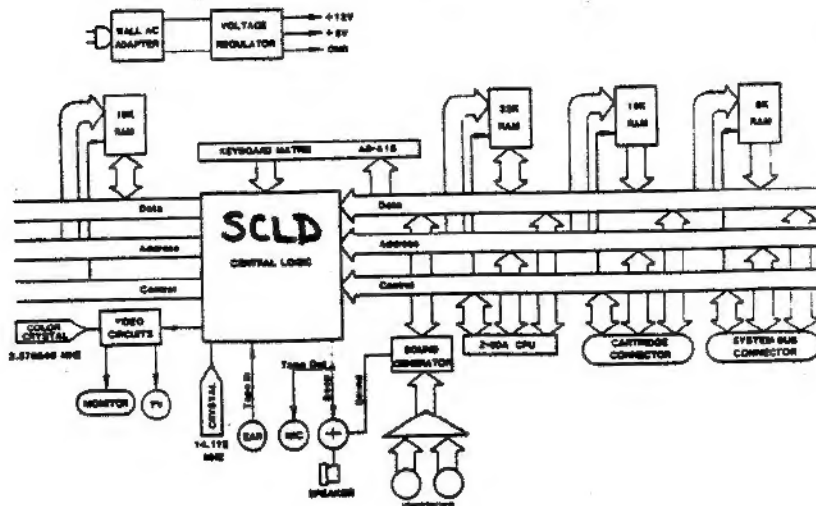
Yes folks, our chip has come in - 97 of them to be exact. The chips in question are the SCLD chips for the American TS 2068, and you have been reading about my struggles to get them into this country for most of this year. Well, **THEY'RE HERE NOW!** Sitting on the desk beside me, in fact. This is not vaporware! (By the way, SCLD stands for Standard Cell Logic Device.)

Do I need an SCLD chip?

Well: do you depend on your 2068? Every chip in the machine, except the SCLD, is available on the open market. If any of them go bad, it's a fairly simple matter to replace them. BUT; if the SCLD goes bad, the machine must be returned to TIMEX for repair - and they are getting very slow (3 months for the last machine Tom Bent sent in).

When should the SCLD be replaced?

Not until something it controls goes wrong. That includes high memory refresh, LOAD and SAVE, video, clock timing, and keyboard decoding. If one of these functions goes wrong, the associated chips should certainly be checked first; but if they are OK, then the SCLD probably has gone bad.



What about TIMEX repair service?

One of Timex's strongest points is their service facility. Personally, it was a big part of my decision to buy a TIMEX computer in the first place. They have provided relatively prompt, cheerful, and consistent service for their computers since they were first introduced, and it has always been extremely

inexpensive. BUT. They no longer build computers. They are no longer legally required to repair them. And, lastly, their stocks of replacement computers have apparently run out. At the time of this writing they are still accepting machines for repair, but, as mentioned above, they are much slower than they used to be.

What is involved in replacing the SCLD?

A lot. The chip was designed for automatic soldering, and requires advanced soldering skills to replace. An article on removing and replacing the chip will be in this issue. If you aren't comfortable doing the soldering yourself, there are people in the user's group that will help.

You will need to buy the chip (\$20.00) and a JEDEC 68 conductor surface mount socket (12.00). Sockets are available from Electronics Plus, 9600 Baltimore Blvd., College Park MD 20740. Their phone number is (301) 441-9009.

CATS will be selling the chips for \$20.00 each, postage and insurance paid, or three or more for \$18.00 each. Canadian orders will cost \$24 for insured mail, or \$20.00 unsecured.

QL Kit News

I spoke with Doug Dewey about the group buy of QL Kits from A+. With our fifteen, he now has over 25 names, and has started negotiations with A+. He has ordered one kit himself already, and reports that it involves no soldering. It arrives with all the backup documentation normally included with a QL, plus an assembly booklet and a troubleshooting booklet.

If you want to get in on the buy, contact Doug Dewey at 206 James St., Carrboro NC 27510 or (919) 929-3079.

AERCO Disk I/F News

Tom Bent has returned with the three Disk I/F Kits that were ordered. They include bare board, connectors, and EPROM. The RAM chips and support logic chips must be purchased separately - a parts list is being worked up. One of those three is mine - I'm getting excited.

Newsletter News

WE NEED ARTICLES! 'Nuff said.

MF

Guide to Bulletin Boards Coming

We have received news from the West that two Sinclair users are putting together what promises to be an extremely useful Guide on all existing bulletin boards which support the Sinclair computers.

The Guide will have sections on: The Big Picture, The Boards, Message Bases, Uploads and Downloads, The Modems, Terminal Software, Available BBS Software, and about ten appendices.

This project is the brainchild of Pete Fisher of Tempe, Arizona and Steve Ishii of Cerritos, California. They plan to provide a free single copy of their Guide to every interested T/S user group, which can then reproduce and distribute the document as the group pleases.

Watch this space if you would like to get one!!

A sample of the Guide's contents is reproduced elsewhere in this issue.

see p. 8

For Sale:

- > Timex 1000 + 16k + Outside keyboard : \$40 +
 - > Timex 2040 printer with 5 rolls pap.: \$40
 - > Timex 2068 : \$75
 - > Centronics printer interface for
either Timex 1000 or 2068 : \$35
 - > The famous Olivetti PR2300 Dry Ink Jet
Printer w/ 15 cartridges : \$100
 - > Zeus assembler (2068) : \$10
 - > ZX Assembler : \$10
 - > Tape Recorder : \$10
 - > Assorted TS1000/2068 books, magazines
Software, tapes : \$CALL
- (All computers include cables, transformers, etc.)
(Printer also includes holder for paper rolls,
and cover.)
- * Keyboard wired for Timex1000,
but needs resoldering in some places.
- > Call me at (301) 384-8325

Syuri Groll

TAPE TO DISK TRAINING

John Riley has agreed to demonstrate the step by step process of changing a BASIC program so that it can be moved to disk via an AERCO interface. Most importantly, he'll show how to transfer the binary data to and from the disk.

So; all you AERCO disk interface owners are invited to join John at noon on November 8th to learn and/or to share knowledge about converting programs to disk. Bring the tape you have been wanting to convert to disk and perhaps John will be able to use yours for demonstration.

NOTE: This will NOT be an opportunity to pirate programs. You will learn how to change the program of a tape you now have or will be purchasing in the future.

Contributors

Tom Bent
Hank Dickson
Pete Fischer
Mark Fisher
Steve Ishii
John Riley

Anagrams for the 1000 (or 2068)

By Mark Fisher

The following program will generate anagram puzzles with word lists you provide, working to fit the words into an array of a size you select. If it cannot fit all the words you have specified into the puzzle, it will list those words not included, as well as those used. There are a modest number of REM's to guide your understanding of the program.

Errata and specific comments:

Lines 580, 590, 600, 610 can be omitted. They have been replaced by the two lines that follow each of them. Some lines were cut in half by the Xerox girl:

```
94 DIM W(NW)
440 LET BR=CR
760 IF ME=0 THEN GOTO 910
```

Lines 9000 - 9020 contain the desired words for inclusion in the puzzle. The present lines are merely an example. Line 9500 sets up the array that determines the direction each word is tried in.

```

BIT
BUG
SOFTWARE
BYTE
BASIC
INPUT
MODEM
PRINTER
RAM
ROM
MEMORY
JOYSTICK
DISK
INTERFACE
NO FIT
HARDWARE
OUTPUT
COMPUTER

```

8 D M Z T H L M G H
 U U I N T C O M O S
 P C O S R H * D A R
 R I X Y D K A Y B E R
 I N T E R F A C E M
 N T I W M S * Y B O
 T U B W I C E T Y S
 E P K C I T S Y O J
 R N E R A W T F O S
 N I M E M O R Y F L

```

1 REM PUZZLE GENERATOR, TRANSLATED BY MARK FISHER, 1983.
2 FAST
3 GOTO 34
4 REM read subroutine
5 FOR J=1 TO LEN A$
6 IF A$(J)="" THEN GOTO 10
8 NEXT J
10 LET B$=""
12 LET A$=A$(J+1 TO )
14 RETURN
15 REM instr subroutine
20 FOR J=1 TO LEN A$
22 IF A$(J)=B$ THEN GOTO 24
24 NEXT J
26 RETURN
34 PRINT " INPUT NUMBER OF ROWS, THEN COLUMNS."
35 INPUT MR
36 PRINT "ROWS = ";MR
37 INPUT MC
38 PRINT "COLS = ";MC
39 LET NC=MR*MC
40 REM I USE LITERALS, NOT SS,XS,DS
43 LET M$="NOT NC
49 REM count words
50 GOSUB 9500
51 REM (= RESTORE)
60 GOSUB 5
61 REM (= READ)
70 IF B$="" THEN GOTO 90
75 LET M$=M$+1
80 GOTO 60
89 REM set up arrays
90 DIM M$(MR,MC,1)
91 DIM W$(NC,10)
92 DIM D$(8,2)
93 DIM S$(8)
94 DIM W$(NC)
95 DIM V$(NC)
99 REM load word list W$( )
100 GOSUB 9000
102 FOR I=1 TO NW
104 GOSUB 5
106 LET W$(I)=B$
110 NEXT I
119 REM load direction array
120 GOSUB 9500
130 FOR I=1 TO 8
135 GOSUB 5
138 LET D$(I,1)=VAL B$
140 GOSUB 5
142 LET D$(I,2)=VAL B$
145 NEXT I
150 CLS
155 PRINT "HIDDEN WORD GENERATOR", "GRID SIZE IS"
MR;" BY ";MC;TAB 8;"", "NUMBER OF WORDS IS ";NW
160 PRINT "SETTING UP GRID, PLEASE WAIT."
165 PAUSE 200
170 FOR I=1 TO MR
172 FOR J=1 TO MC
174 LET M$(I,J)=""
176 NEXT J
178 NEXT I
189 REM set up rand cell sequence
190 FOR I=1 TO NC
200 LET Q=INT (RND*NC+1)
205 IF S(Q)>0 THEN GOTO 200
210 LET S(Q)=I
220 NEXT I
229 REM then rand word seqd
230 FOR I=1 TO NW
240 LET Q=INT (RND*NW+1)
250 IF V(Q)>0 THEN GOTO 240
260 LET V(Q)=I
270 NEXT I
280 LET MF=NOT MC
290 LET WA=NW

```

```

300 LET FU=MF
305 LET DI=NOT MF
310 CLS
315 PRINT "STARTING TO FILL THE GRID..."
318 PAUSE 100
320 FOR P=1 TO NC
329 REM CP=CELL POS, FROM RAND TABLE. CR=CELL ROW. CC=CELL COL..
330 LET CP=S(P)
340 LET CR=INT ((CP-1)/MC)+1
345 LET CC=CP-(CR-1)*MC
350 IF M$(CR,CC)<>" " THEN GOTO 940
360 IF WA=0 THEN LET MF=WA
365 IF WA=0 THEN GOTO 950
370 LET M$(CR,CC)=""
379 REM got an empty cell looking for a clear path
380 LET DK=1
389 REM find beginning cell (br'bc)
390 LET IR=D(DI,1)
395 LET IC=D(DI,2)
400 LET RT=1
405 IF IR<0 THEN LET RT=MR
410 IF IR=0 THEN LET RT=CR
420 LET CT=1
425 IF IC<0 THEN LET CT=MC
430 IF IC=0 THEN LET CT=CC
440 LET BC=CC
445 LET BC=CC
450 IF (BR=RT AND IR<>0) OR (BC=CT AND IC<>0) THEN GOTO 490
460 LET BR=BR-IR
470 LET BC=BC-IC
480 GOTO 450
489 REM find end cell er'ec
490 LET RT=1
495 IF IR>0 THEN LET RT=MR
500 IF IR=0 THEN LET RT=CR
510 LET CT=1
515 IF IC>0 THEN LET CT=MC
520 IF IC=0 THEN LET CT=CC
530 LET ER=CR
535 LET EC=CC
540 IF (ER=RT AND IR<>0) OR (EC=CT AND IC<>0) THEN GOTO 560
550 LET ER=ER+IR
560 LET EC=EC+IC
570 GOTO 540
579 REM build string for contents of path
580 REM LET UR=ER*(BR=ER)+BR*(BR=ER)
582 LET UR=ER
585 IF BR=ER THEN LET UR=BR
590 REM LET LR=BR*(BR=ER)+ER*(BR=ER)
591 LET LR=BR
595 IF ER=BR THEN LET LR=ER
600 REM LET UC=EC*(BC=EC)+BC*(BC=EC)
601 LET UC=EC
605 IF BC=EC THEN LET UC=BC
610 REM LET LC=BC*(BC=EC)+EC*(BC=EC)
611 LET LC=BC
615 IF EC=BC THEN LET LC=EC
620 LET PR=BR
623 LET PC=BC
626 LET P$=""
630 LET P$=P$+M$(PR,PC)
640 LET PR=PR+IR
643 LET PC=PC+IC
646 IF PR=LR AND PR=(UR AND PC)=LC AND PC=(UC THEN GOTO 630
650 LET PL=LEN P$
651 PRINT P$,PL
652 LET B$=""
653 PAUSE 100
654 LET A$=P$
656 GOSUB 20
658 LET SP=J
660 FOR Q=1 TO SP
665 FOR D=PL TO SP STEP -1
670 LET C$=P$(Q TO D-1)
675 LET CL=LEN C$
679 REM now try to fit a word
680 LET Q=1
690 LET W$=V(Q)
691 REM GET LEN OF W$(W) IN J
692 LET A$=W$(W)
694 LET B$=""
696 GOSUB 20
700 IF J-1=CL THEN GOTO 710
703 LET MF=0
706 GOTO 910
710 LET MF=1
720 FOR C=1 TO CL
730 IF C$(C)=W$(W,C) OR C$(C)="" OR C$(C)="" THEN GOTO 750
740 LET C=CL
745 LET MF=0
750 NEXT C
760 IF MF=0 THEN GOTO 910

```



```

707 REM pad word out to full len
778 LET F$=W$(W, TO J-1)
771 LPRINT F$,PL,"BR=";BR,"BC=";BC
772 LPRINT F$,G,D
775 LET D=D+1
788 IF G<=1 THEN GOTO 798
782 LET F$=" "+F$
784 LET G=G+1
786 GOTO 788
798 IF D=PL THEN GOTO 888
792 LET F$=F$+" "
794 LET D=D+1
796 GOTO 798
799 REM set word into grid
888 LET PR=1
881 LPRINT F$,G,D
883 LET R=BR
886 LET C=BC
818 LET R=F$(PR)
815 IF R$="" THEN GOTO 838
828 LET M$(R,C)=R$
838 IF (R=ER AND IR<>0) OR (C=EC AND IC<>0) THEN GOTO 851
848 LET C=C+1
842 LET R=R+1
844 LET PR=PR+1
846 GOTO 818
849 REM update word list
858 IF Q=WA THEN GOTO 878
868 FOR I=Q TO WA-1
862 LET U(I)=U(I+1)
864 NEXT I
878 LET WA=WA-1
888 LET W(W)=1
898 LET D=SP
894 LET G=SP
898 LET DK=8
908 CLS
982 PRINT "USED A WORD; ";F$
984 PAUSE 188
918 LET Q=Q+1
915 IF MF=0 AND Q<=WA THEN GOTO 898
928 NEXT D
925 NEXT G
938 LET DI=DI+1
932 LET DK=DK+1
934 IF DI>0 THEN LET DI=1
948 IF DK<=8 THEN GOTO 398
968 PRINT NC-P;" CELLS NOT EXAMINED YET"
965 PAUSE 188
966 CLS
978 NEXT P
971 FOR I=1 TO MR
972 FOR J=1 TO MC
973 IF M$(I,J)="" THEN LET M$(I,J)=CHR$(RND*26+38)
974 LET FU=FU+1
976 NEXT J
978 NEXT I
988 SLOW
1008 CLS
1018 PRINT "PUZZLE COMPLETED"
1028 FOR I=1 TO NJ
1038 IF W(I)<>0 THEN PRINT W$(I)
1048 NEXT I
1041 PRINT "NO FIT:"
1042 FOR I=1 TO NJ
1013 IF W(I)=0 THEN PRINT W$(I)
1044 NEXT I
1058 FOR I=1 TO MR
1068 FOR J=1 TO MC
1078 PRINT AT (I*2),(J*2)+10;M$(I,J)
1088 NEXT J
1098 NEXT I
1095 POKE 16418,0
1108 PRINT AT 22,8;"OUTPUT TO PRINTER ? (Y OR N)"
1118 PAUSE 4E4
1128 IF CODE INKEY$=62 THEN GOTO 1148
1125 IF CODE INKEY$=51 THEN STOP
1138 GOTO 1118
1148 COPY
8999 STOP
9888 LET A$="BIT,BUG,SOFTWARE,HARDWARE,BYTE,BASIC,"
9818 LET A$=A$+"INPUT,OUTPUT,MODEM,PRINTER,COMPUTER,RAM,"
9828 LET A$=A$+"ROM,MEMORY,JOYSTICK,DISK,INTERFACE,/"
9838 RETURN
9588 LET A$="0,1,1,1,1,0,1,-1,0,-1,-1,-1,-1,0,-1,1,"
9518 RETURN

```

Installing the SCLD

If the Z-80 chip is the brain of the TS 2068 computer, the SCLD is the heart - pumping information back and forth, and keeping the entire machine in operation. It is now possible to perform a heart transplant for the 2068.

Your machine is a candidate for a transplant if it is a US Timex TS 2068, and the SCLD is marked TS 2000 and NCR F808979. You will need a new SCLD chip (which can be purchased from CATS @ \$20.00) and a JEDEC 68 conductor surface mount socket, available from Electronics Plus for \$12.00. You could solder the replacement chip right in, but you would be pretty silly to do so. For tools, you will need a needle point, 15 Watt soldering iron, electronics grade solder, flux remover, and perhaps solder wick.

Removing the old chip

The SCLD chip is soldered to the surface of the board. The contacts are curved under the chip, and the principal contact point is thus under the chip. In the factory, the chip would be removed by a ducted blast of intensely hot air, melting all the solder joints simultaneously. This tool costs over \$200.00.



Before beginning work, it would be a good idea to remove all socketed chips, and store them in aluminum foil to fight static.

The area around the SCLD will have to be cleared - removing the large black electrolytic capacitor will free up the access. Variable cap. C5 will be in the way when you are soldering the socket in, so that should probably go also.

Now that your work area is cleared, you have two choices: Either clip out the old chip, or remove the solder from the joint using solder wick and lots of flux.

Either way, be sure to clean the contacts on the board after the chip is loose. The socket is designed for automatic soldering machines, and is intolerant of excess solder bumps on the contacts.

Installing the socket

The socket that is currently available has no projecting solder tabs. It is still possible to solder

it in by hand, as each contact is exposed at the side, but it requires a needle point iron.

CAREFULLY align the socket with the conductors on all four sides, being sure to align the beveled corner as a keyway. Solder ONE conductor at a corner, pressing the socket down firmly, and check again. Solder ONE more conductor at another corner (again pressing firmly), and check again. This is your last chance to re-align the socket. By pressing firmly, you minimize the gap to be filled with solder.

Now procede around the socket, feeding a minimum amount of solder into each connection. When each side is completed, check for solder bridges with a VOM by checking continuity between all adjacent contacts. You should get zero Ohms all around. Solder bridges may be corrected by blasting the molten solder with the aerosol flux remover.

Replace the components you removed, carefully press the new SCLD into the socket with the beveled corner towards the beveled corner on the silkscreen, cross your fingers, and try 'er out!

As further techniques are developed and refined, they will be reported in the newsletter. If you don't want to chance the operation yourself, there are people around that will lend a hand.

MF

WHO NEEDS AN SCLD!!!

This little square is the brain of the 2068. It can be malfunctioning and the computer will still work. What you find is that odd things occur that don't happen on other machines. You need an SCLD if:

1. PRINT FREE= 6000 instead of 38000
2. A keyboard column doesn't work (eg. 3edc8ikm).
3. Mucho LOADING and SAVEing problems and you have made the published loading and save fixes.
4. You Zapped your 5 volts with 15 volts, and have already replaced everything else!
5. When you power up, you get blinking squares, and it isn't the 2 video ram chips or the ROMs. tb.

OUR CHIPS



CAME IN!

List of Bulletin Boards Available to Sinclair Users

[illegible]

adventures on Compuserve

About six months ago I got my claws on a sick 2050 modem board from the surplus market. One trip to Radio Shack later plus a few days waiting for Curry Computers to deliver Mterm II to my door, I was ready! But ready for what? There were no bulletin boards within my local telephone dialing district, and long-distancing to a national BBS is (for me, at least) the road to financial ruin. So I hopped on down the nearest bookstore and bought a starter kit for Compuserve.

For the \$28 I shelled out for the starter kit I got about \$40 worth of goodies, consisting of the Compuserve Users Guide, 5 hours of "connect" time, and a startup user's I.D. number and password. There was also a list of all of the "node" phone numbers. I found the one that is in my dialing area, rang it up, and suddenly I was in the telecommunications biz!

For the next several weeks I happily cruised around the service, sampling the many and varied offerings of the USA's most popular and successful online service. It is a veritable cornucopia: I would go so far as to say that there is probably not a single area of interest that is not catered to in some way.

Soon my five hours' credit was nearing its end, and as I began to consider the doleful prospect of future usage showing up on my VISA bill, I settled down to a couple of basic interests and (sigh) a budget.

My main area of use for Compuserve today is to participate in the Timex/Sinclair SIG (Special Interest Group). This SIG meets every Wednesday night at 10:00 p.m. EST. It is composed of Sinclair users from across the country, participating in a real-time discussion of anything and everything of interest in the field of their chosen machines. Some names that appear on the screen are familiar.

Dave Rothman, a sometime featured speaker at CATS meetings, is the SYSOP (system operator) for the Sinclair SIG. Mark Fendrick, who writes the columns in Computer Shopper and ZX Computing, is online most Wednesdays.

Rob Curry of Curry Computers is usually there, full of news to share about new products for our machines. These are very nice people, willing to converse with anyone and ready to help in whatever way they can.

But just as friendly and useful to know are the "lesser knowns" who frequent the SIG. Like George Mockridge, president of a user's group out in California, who just sent me a program for our 2068 library. Or Mowgli Assor, a college student in Ohio, who has been investigating Aerco's R/PM lately. Or Lonnie Kendall, who helped me with a problem I was having with my QL recently. All in all there are 15 to 20 "regulars" who participate in the weekly conference, and others who "look in" from time to time. There is also a dedicated message board for the Sinclair SIG's use, and a software library for downloading with programs for the TS1000, 2068, and QL.

I try to "budget" myself to about 2 to 3 hours online each month. For me, it is money well spent, combining a good source of information and learning, friendship with like-minded persons nation wide, and a good excuse to pound away at my beloved little chicklet keyboard. My advice to you: try it, you'll like it!

John Riley

FOR SALE

Full-blown ASCII-plus Keyboard. Has magnetic-reed switches on keyboard, convertible to double pole for shifted functions. Extra undedicated keys, as well. Strong steel case, speaker. Asking price \$25.00.

Call Louis Feher (original CATS member) at 577-3928.

2068 Freeware

Here is an update to the 2068 software catalog that was published in last month's newsletter. We have had a very good response from our members and friends, and the end result is a further enrichment of everyone's program libraries!

To Volume 1 (Games), add:

Hiddenword: A word puzzle generator of exceptional quality that was submitted by George Mockridge of the Pacific Users Group.

Tic Tac Toe: The classic noughts and crosses game with several levels of difficulty.

Q-Bert: A nicely-done adaptation of the arcade game.

Poker, Blackjack, and Cribbage: These three programs pit you against the computer in these popular card games. The graphics are very nicely done.

To Volume 4 (Spectrum Programs) add:

WINDOS: This impressive utility comes in three parts -- an introduction, a demo, and the machine code itself, which gives the Spectrum some of the same windowing capabilities of the QL! After watching the demo, break into it to see how the routines are called through CHR\$. Further documentation is available from the library upon request.

The Flying Formula: This was a "givaway" program from ZX Computing. Nicely executed and fun to play.

And now presenting -- Volume 5 (Even More 2068 Utilities)!!

T/PI Pads: For you electronics hackers, a program that helps you to calculate exactly what capacitor to add to your circuit, and then draws a diagram.

Convert: Input a number and get back the equivalent value in several counting systems, such as decimal, hex, and binary.

Piano: Create music on your 2068 and then play it back to your friends and/or enemies.

Clover: A clever little drawing demo that draws a clover using some rather complex calculations.

Polygon: a "least squares polynomial fit" program.

Calendar: Calculates a number of interesting facts about dates that you input, such as the day a particular date fell (or will fall) on, and the number of days elapsed between two dates.

Nodes: Draws a complex polygonal figure around size and node specifications that you input.

Write: Another simple but effective word processor.

Album: A program that allows you to store five screens of artwork, paging continually through them. Includes demo pictures.

Boxlabel 1 & 2: Produces inserts for your cassette boxes, with program #1 catering to 2040 users and #2 modified for an 80 column printer. Includes the AERCO printer driver.

Calculator: A handy program if you have misplaced your pocket calculator.

A couple of other programs have been submitted which I am holding back until I can make sure they are public domain. I have the promise of more programs on the way, so be on the lookout for further updates to the catalog. For a full listing of the CATS Public Domain 2068 Software Library, or information on how you can get a copy of this collection (which presently fits onto two 60 minute tapes), send a long SASE to John Riley, 1316 Farrara Dr., Odenton, Maryland 21113. Alternatively, you can call at (301)674-8560 or drop me a note on Compuserve. My CIS number is 73317,3526.

John Riley

Capitol Area Timex/Sinclair Users' Group
P.O.Box 725
Bladensburg, MD 20710

Name _____

Address _____

ZIP _____

Phone Home _____ Office _____

Memberships - \$15.00 (family/individual); make checks payable to C.A.T.S.

If family membership, please list family members participating:

Occupation _____

Ham Radio call sign _____

Equipment

ZX 80 _____ RAM size _____

KA 80 _____ full keyboard _____

ZX 81 _____ Printer _____

TS 1000 _____ type _____

TS 2000 _____ other interface _____

Special interest use for computer: ie, games, ham radio interface,
business, other, etc. _____

Languages: Basic _____ Other _____

Machine _____

No. of years computer experience _____

What committees would you like to serve on? _____

Comments: Where did you hear of C.A.T.S?

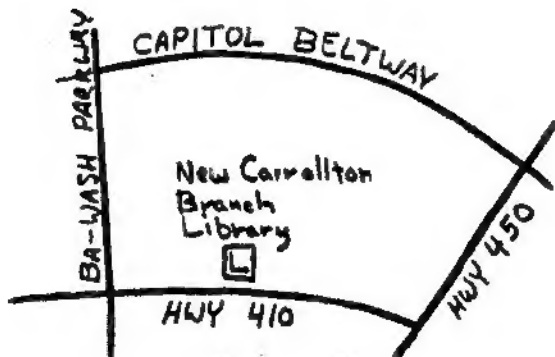
Do not write below:

Dt. Pd. _____ Amt. _____ Membership No. _____

Ca. _____ Ck. _____

The mailing address of the Capitol Area Timex/Sinclair User's Group is:
 Capitol Area Timex/Sinclair User's Group
 P.O. Box 725
 Bladensburg, MD 20710
 CATS is a non-profit special interest organization dedicated to serving the interests of those who own, use, or are interested in learning more about the Timex/Sinclair family of personal computers.
 The official contact person for CATS is JULES GESANG!
 301-922-0767
 Meetings are held on the second Saturday of each month at 2 P.M. in the large meeting room of the New Carrollton Branch Public Library.
 Ham Radio Network Information
 OZX Net... Wednesdays, 9p.m. local time; 14.345 MHz NV4F NCS
 Eastern Regional Sinclair Net... Sundays, 1600 ZI 7.245 MHz K0ZF NCS

CATS Newsletter
 P.O. Box 725
 Bladensburg MD 20710



COME TO OUR MEETING!

The next meeting of C.A.T.S. will be held on:

Saturday, November 8, 1986: 12:00 PM Hardware meeting
 2:00 PM General meeting

At: New Carrollton Public Library
 7414 Riverdale Road (Hwy 410), New Carrollton, MD

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECIEVE

Dues = \$16.00 per year, per family.

18 First Class